

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
14 July 2005 (14.07.2005)

PCT

(10) International Publication Number
WO 2005/063484 A1

(51) International Patent Classification⁷: **B32B 27/18**,
7/02, C08F 214/28, 216/12, G02B 1/11, 5/30

(21) International Application Number:
PCT/JP2004/019752

(22) International Filing Date:
24 December 2004 (24.12.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2003-434142 26 December 2003 (26.12.2003) JP
2004-006062 13 January 2004 (13.01.2004) JP
2004-035077 12 February 2004 (12.02.2004) JP
2004-065991 9 March 2004 (09.03.2004) JP
2004-096227 29 March 2004 (29.03.2004) JP

(71) Applicant (for all designated States except US): FUJI
PHOTO FILM CO., LTD. [JP/JP]; 210, Nakanuma,
Minami-Ashigara-shi, Kanagawa 2500123 (JP).

(72) Inventors; and

(75) Inventors/Applicants (for US only): IKEDA, Akira.
MURAMATSU, Yuzo. KATO, Eiichi. NAKAMURA,
Kazuhiro.

(74) Agents: OGURI, Shohei et al.; Eikoh Patent Office, 13th
Floor, ARK Mori Building, 12-32, Akasaka 1-chome, Mi-
nato-ku, Tokyo 1076013 (JP).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG,
KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG,
MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH,
PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN,
TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,
SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN,
GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the
claims and to be republished in the event of receipt of
amendments

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: ANTIREFLECTION FILM, POLARIZING PLATE, METHOD FOR PRODUCING THEM, LIQUID CRYSTAL DIS-
PLAY ELEMENT, LIQUID CRYSTAL DISPLAY DEVICE, AND IMAGE DISPLAY DEVICE

(57) Abstract: To provide an antireflection film which is easily and inexpensively producible and which has an antireflection prop-
erty, a scratch resistance and a stain resistance in a sufficient level, and a polarizing plate and a liquid crystal display device utilizing
the antireflection film of such excellent ability, the antireflection film includes a transparent support and a low-refractive index layer
having a lower refractive index than the transparent support, wherein the low-refractive index layer is an outermost layer, and the
low-refractive index layer contains a hollow silica particle and a compound that reduces a surface free energy of the outermost layer.



WO 2005/063484 A1